

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059657

Luminaire Tested: S123RDR-H560D830-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059657  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H560D830-X4F0-XX-UDD-SVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

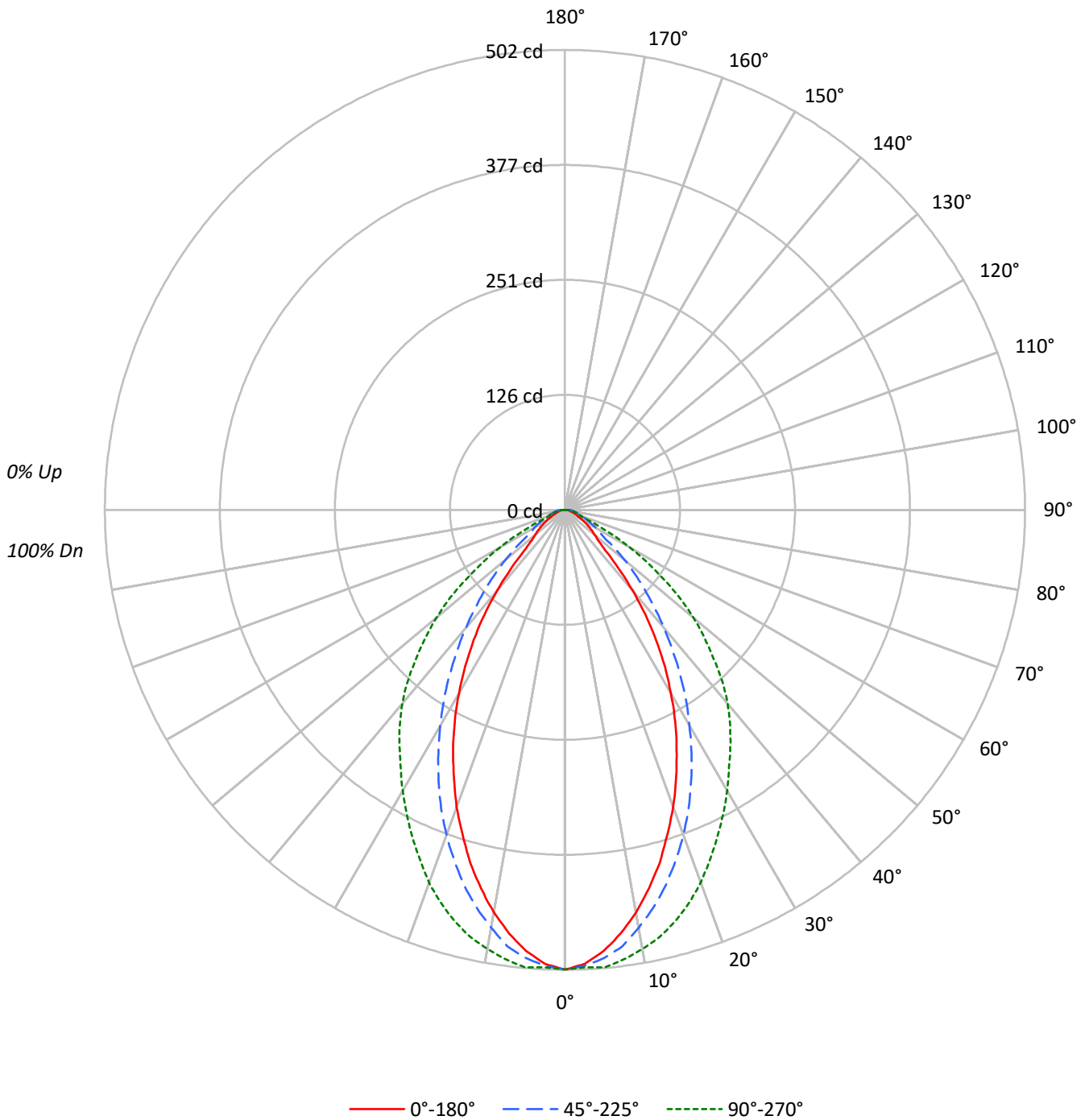
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 673.5 lumens  
Efficiency: N/A  
Efficacy: 38.7 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.08 / 0.98  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				37

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5891	5891	5891
5°	5700	5789	5907
10°	5321	5522	5804
15°	4849	5159	5652
20°	4315	4720	5413
25°	3739	4224	5104
30°	3135	3684	4800
35°	2484	3136	4511
40°	1758	2580	4232
45°	1035	2039	3809
50°	775	1549	3336
55°	651	1046	2680
60°	526	892	1902
65°	417	761	1003
70°	364	663	621
75°	340	622	594
80°	338	676	588
85°	418	1010	754

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3809 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.2	6.9
10°-20°	120.0	17.8
20°-30°	152.8	22.7
30°-40°	143.8	21.3
40°-50°	103.5	15.4
50°-60°	59.8	8.9
60°-70°	27.3	4.1
70°-80°	13.7	2.0
80°-90°	6.5	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	319.0	47.4
0°-40°	462.8	68.7
0°-60°	626.1	93.0
0°-90°	673.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	673.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	502	502	502	502	502	
5°	484	492	491	496	501	45
15°	399	413	424	448	465	111
25°	289	304	326	362	394	132
35°	173	188	219	269	315	107
45°	62	78	123	184	229	53
55°	32	33	51	97	131	28
65°	15	21	27	30	36	15
75°	8	14	14	13	13	8
85°	3	7	8	7	6	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	501.7	501.7	501.7	501.7	501.7
2.5°	496.1	502.3	498.0	498.6	499.9
5°	483.6	491.7	491.1	496.1	501.1
7.5°	466.2	475.5	480.5	488.0	494.9
10°	446.3	456.8	463.1	476.8	486.8
12.5°	423.2	436.9	445.0	463.1	477.4
15°	398.9	413.2	424.4	448.1	464.9
17.5°	371.5	387.0	401.4	429.4	450.0
20°	345.3	360.2	377.7	408.2	433.2
22.5°	316.6	332.8	352.8	385.2	413.2
25°	288.6	303.5	326.0	362.1	393.9
27.5°	260.5	275.5	299.2	339.1	374.0
30°	231.2	246.8	271.7	316.0	354.0
32.5°	202.6	217.5	245.6	293.6	333.4
35°	173.3	188.2	218.8	269.2	314.7
37.5°	144.6	160.2	192.6	249.3	296.0
40°	114.7	131.5	168.3	228.7	276.1
42.5°	86.6	104.7	144.0	207.5	254.3
45°	62.3	77.9	122.8	184.5	229.4
47.5°	48.6	56.7	103.5	160.8	206.3
50°	42.4	43.6	84.8	139.0	182.6
52.5°	36.8	38.0	66.7	118.4	157.7
55°	31.8	33.0	51.1	97.2	130.9
57.5°	26.8	28.7	42.4	77.3	105.3
60°	22.4	24.9	38.0	59.2	81.0
62.5°	18.1	22.4	32.4	43.6	58.0
65°	15.0	21.2	27.4	30.5	36.1
67.5°	12.5	19.3	23.1	21.8	21.2
70°	10.6	17.5	19.3	17.5	18.1
72.5°	8.7	16.2	16.2	15.0	15.0
75°	7.5	14.3	13.7	13.1	13.1
77.5°	6.2	12.5	11.8	11.2	10.6
80°	5.0	10.0	10.0	9.3	8.7
82.5°	4.4	8.1	8.1	8.1	6.9
85°	3.1	6.9	7.5	6.9	5.6
87.5°	2.5	6.2	6.2	5.6	3.7
90°	0.0	0.0	0.0	0.0	0.0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	6.14	7.46	6.50	7.77	8.08	13.50	14.81	13.86	15.13	15.44
	3H	7.53	8.70	7.91	9.03	9.39	13.73	14.90	14.11	15.23	15.59
	4H	8.08	9.17	8.48	9.52	9.90	13.84	14.93	14.24	15.28	15.67
	6H	8.51	9.51	8.93	9.88	10.28	13.96	14.96	14.37	15.33	15.72
	8H	8.69	9.64	9.12	10.03	10.44	14.01	14.96	14.44	15.35	15.75
	12H	8.85	9.75	9.28	10.14	10.57	14.07	14.98	14.50	15.36	15.79
4H	2H	7.23	8.32	7.64	8.68	9.06	13.45	14.54	13.86	14.89	15.28
	3H	8.90	9.79	9.31	10.20	10.60	13.81	14.71	14.23	15.11	15.52
	4H	9.71	10.51	10.14	10.92	11.37	14.01	14.81	14.45	15.23	15.67
	6H	10.34	11.03	10.81	11.48	11.95	14.24	14.93	14.70	15.38	15.84
	8H	10.58	11.23	11.05	11.67	12.14	14.34	14.99	14.81	15.44	15.91
	12H	10.79	11.37	11.28	11.85	12.32	14.47	15.04	14.96	15.53	16.00
8H	4H	10.15	10.79	10.62	11.24	11.71	14.05	14.70	14.52	15.14	15.61
	6H	11.06	11.59	11.56	12.09	12.57	14.38	14.91	14.88	15.40	15.88
	8H	11.48	11.96	12.00	12.47	12.96	14.57	15.04	15.09	15.56	16.05
	12H	11.90	12.32	12.42	12.82	13.39	14.82	15.24	15.33	15.73	16.31
12H	4H	10.20	10.78	10.69	11.26	11.73	14.04	14.61	14.53	15.09	15.57
	6H	11.19	11.67	11.72	12.19	12.68	14.39	14.87	14.91	15.38	15.88
	8H	11.74	12.16	12.25	12.65	13.22	14.65	15.07	15.16	15.57	16.14